IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

BALLY MANUFACTURING CORPORATION,

Plaintiff,

vs.

D. GOTTLIEB & CO., WILLIAMS ELECTRONICS, INC., ROCKWELL INTERNATIONAL CORPORATION, and GAME PLAN, INCORPORATED,

Defendants.

Civil Action
No. 80-C-5048

SUPPLEMENTAL MEMORANDUM OF PLAINTIFF IN OPPOSITION TO DEFENDANT ROCKWELL INTERNATIONAL CORPORATION'S MOTION TO DISMISS

This paper is a supplement to the "Memorandum of Plaintiff in Opposition to Defendant Rockwell International Corporation's Motion to Dismiss" filed in the above-captioned case on December 19, 1980. In Plaintiff's original memorandum on pages 12 and 13 it was asserted that the patent in suit was directed to a solid-state pinball machine having a certain type of control and display circuit, but a copy of the patent in suit, U.S. Patent No. 4,198,051, issued April 15, 1980, was not of record in this case. Therefore, plaintiff submits herewith a copy of the patent in suit.

It is pointed out that the claims, which define the invention covered by the patent, are contained on the last two pages of the patent in columns 69 through 72. An examination

of the claims unquestionably shows that the patent is directed to solid-state pinball machines having certain type of control and display circuits, and it is the control and display circuits which Rockwell makes and sells to Gottlieb for use in the pinball machines which are the subject of this lawsuit.

Respectfully submitted,

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December 30, 1980

United States Patent [19]

Bracha et al.

[11] **4,198,051**

[45] **Apr. 15, 1980**

[54] COMPUTERIZED PIN BALL MACHINE

[75] Inventors: Marion F. Bracha, Chicago; William H. Englehardt, Skokie, both of Ill.

[73] Assignee: Bally Manufacturing Corporation, Chicago, Ill.

[21] Appl. No.: 633,470

[22] Filed: Nov. 19, 1975

[51] Int. Cl.[2] A63F 7/00

[52] U.S. Cl. ..... 273/121 A

[58] Field of Search ..... 273/1 E, 85 R, 54 C, 273/118 A, 119 A, 121 A, 122 A, 125 A, 126 A, DIG. 28; 235/1 B, 92 GA, 156; 445/1; 340/172.5, 323, 337

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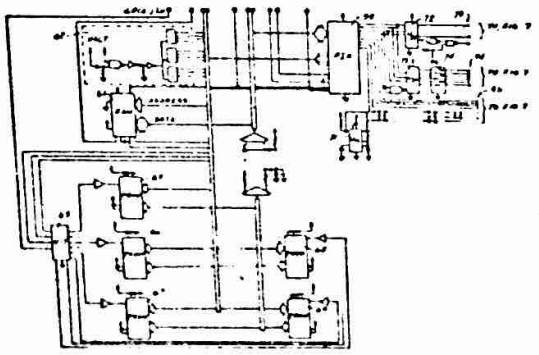
Primary Examiner—Vance Y. Hum

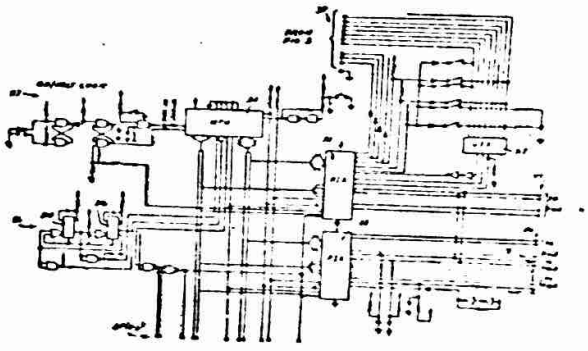
Attorney, Agent, or Firm—Fitch, Even & Tabin

[57] ABSTRACT

A pin ball machine which incorporates a micro processor instead of relays and hard wiring wherein the processor is programmed such that when the coin switches, the flipper switches and the various scoring switches of the machine are energized the computer accumulates and drives indicators to indicate the score as well as drives the flippers, the sling shots and other units of the playfield to provide an improved machine.

22 Claims, 32 Drawing Figures





written in position 0. Only the specified bit is affected, all other bits in M(ADOR) are unchanged, inputs are bit (07), ADDR (0-64K), and TEMP (0 or 1). This program is represented by blocks 215 through 223.

FIG. 13 illustrates a subroutine which writes the LMPMAT to the peripheral interface adapter 58. The output data is formated for use by 8 channel demultiplexer. This subroutine is represented by blocks 224 through 233.

FIG. 14 is a subroutine for NXTPLY and is represented by blocks 234 through 244.

FIG. 15 illustrates a subroutine used for checking the credit when a coin is deposited in the machine.

FIG. 16 is a subroutine used to monitor coins and give appropriate credit.

FIG. 17 illustrates a subroutine for interrupt which is initiated by a 120 cycle per second signal which reads the 5 bit byte by 8 bite input matrix and processes the input data using EDGEDET.

FIG. 18 is a new game routine.

FIG. 19 illustrates a routine for collecting display of bonus.

FIG. 21 illustrates the routine which reads data from 7 by 8 input matrixes.

FIG. 22 illustrates the routine which identifies the active interrupt port and transfers control to an appropriate routine.

FIG. 23 illustrates the zero credit subroutine.

FIG. 24 illustrates the subroutine for scoring.

FIG. 25 is a subroutine for checking various values that have changed states.

FIG. 26 illustrates a routine for lighting bonus lights.

FIG. 27 is a bonus amount subroutine which is used to register the amount of bonus after a target is hit.

FIG. 28 is a subroutine for monitoring the target hits and scores accordingly.

FIG. 29 is a routine for monitoring the target hits. This routine scans each bit of the words jumping to a designated subroutine when a bit is set.

FIG. 30 illustrates a routine to determine free game threshold.

FIG. 31 is an alternative subroutine for monitoring coins and giving appropriate credit.

FIG. 32 is a routine to shift a specified bit to the carry flag position.

Although this invention has been described with respect to preferred embodiments, it is not to be so limited as changes and modifications may be made which are within the full intended scope as defined by the appended claims.

PROGRAM FOR MPU

OF INVENTION

```
00100
00110                    NAM     FOURTH
01001                    OPT     DB16,MEM,SYMBOL
01002                * F R O N T
01005          005A  *RAM LABEL ASSIGNMENTS
01010          0048  BEGSTK EQU    90        LOAD ADDR. FOR BEGIN STACK.
01015                RESRAM EQU    BEGSTK-18  STRT.RESV.RAM AREA
01035                *STARTING AREA
01040          0034  *PIA LABEL ASSINGMENTS
01045          0035  PIA1DA EQU    $84
01050          0086  PIA1CA EQU    PIA1DA+1
01055          0087  PIA1DB EQU    PIA1DA+2
01060          0088  PIA1CB EQU    PIA1DA+3
01065          0089  PIA2DA EQU    $88
01070          008A  PIA2CA EQU    PIA2DA+1
01075          008B  PIA2DB EQU    PIA2DA+2
01079          0090  PIA2CB EQU    PIA2DA+3
01080          0091  PIA3DA EQU    $90
01081          0092  PIA3CA EQU    PIA3DA+1
01082          0093  PIA3DB EQU    PIA3DA+2
01083                PIA3CB EQU    PIA3DA+3
01085          0800  *ROM LABEL ASSIGNMENTS
01090                BEGROM EQU    $0800
01095          0000  *LAMP SYMBOL ASSIGNMENTS
01100          0080  DRLPA0 EQU    %00000000   A TARGET OFF
01105          0001  DRLPA1 EQU    %10000000   A TARGET ON
01110          0081  DRLPB0 EQU    %00000001   B TARGET OFF
01115          0002  DRLPB1 EQU    %10000001   B TARGET ON
01120          0082  DRLPC0 EQU    %00000010   C TARGET OFF
01125          0003  DRLPC1 EQU    %10000010   C TARGET ON
01130          0083  DRLPD0 EQU    %00000011   D TARGET OFF
01135          0004  RVLPA0 EQU    %10000011   D TARGET ON
                                   %00000100   A ROLLOVER OFF
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